

=====

Sequence Listing could not be accepted due to errors.

See attached Validation Report.

If you need help call the Patent Electronic Business Center at (866) 217-9197 (toll free).

Reviewer: Keisha Douglas

Timestamp: [year=2009; month=3; day=12; hr=16; min=47; sec=41; ms=274; ]

=====

\*\*\*\*\*

Reviewer Comments:

<220>

<221> misc\_feature

<223> r is a or g; i is inosine; w is t or a; k is t or g; d is a, t or g; y is c or t.

<400> 136

cargciaaaw wwktdaarga ytgtg

25

Please correct invalid nucleic acid found in the above sequence id# 136 at location 6. This error is also appearing in sequence id# 137.

\*\*\*\*\*

Application No: 10582393 Version No: 3.0

**Input Set:**

**Output Set:**

**Started:** 2009-02-17 20:00:54.827  
**Finished:** 2009-02-17 20:00:57.487  
**Elapsed:** 0 hr(s) 0 min(s) 2 sec(s) 660 ms  
**Total Warnings:** 137  
**Total Errors:** 2  
**No. of SeqIDs Defined:** 137  
**Actual SeqID Count:** 137

Error code	Error Description
W 402	Undefined organism found in <213> in SEQ ID (1)
W 402	Undefined organism found in <213> in SEQ ID (2)
W 402	Undefined organism found in <213> in SEQ ID (3)
W 402	Undefined organism found in <213> in SEQ ID (4)
W 402	Undefined organism found in <213> in SEQ ID (5)
W 402	Undefined organism found in <213> in SEQ ID (6)
W 402	Undefined organism found in <213> in SEQ ID (7)
W 402	Undefined organism found in <213> in SEQ ID (8)
W 402	Undefined organism found in <213> in SEQ ID (9)
W 402	Undefined organism found in <213> in SEQ ID (10)
W 402	Undefined organism found in <213> in SEQ ID (11)
W 402	Undefined organism found in <213> in SEQ ID (12)
W 402	Undefined organism found in <213> in SEQ ID (13)
W 402	Undefined organism found in <213> in SEQ ID (14)
W 402	Undefined organism found in <213> in SEQ ID (15)
W 402	Undefined organism found in <213> in SEQ ID (16)
W 402	Undefined organism found in <213> in SEQ ID (17)
W 402	Undefined organism found in <213> in SEQ ID (18)
W 402	Undefined organism found in <213> in SEQ ID (19)
W 402	Undefined organism found in <213> in SEQ ID (20)

**Input Set:**

**Output Set:**

**Started:** 2009-02-17 20:00:54.827  
**Finished:** 2009-02-17 20:00:57.487  
**Elapsed:** 0 hr(s) 0 min(s) 2 sec(s) 660 ms  
**Total Warnings:** 137  
**Total Errors:** 2  
**No. of SeqIDs Defined:** 137  
**Actual SeqID Count:** 137

Error code	Error Description
This error has occurred more than 20 times, will not be displayed	
E 259	Found undefined lettercode; POS (6) SEQID(136)
E 259	Found undefined lettercode; POS (6) SEQID(137)

SEQUENCE LISTING

<110> GREINER BIO-ONE GMBH  
Kranewitter, Wolfgang  
Mittermayr, Christian  
Winner, Florian  
Iftner, Thomas

<120> PRIMERS AND PROBES FOR DETECTING GENITAL HPV GENOTYPES

<130> GRE-106US

<140> 10582393  
<141> 2009-02-17

<150> DE 103 57 677.0  
<151> 2003-12-10

<160> 137

<170> PatentIn version 3.5

<210> 1  
<211> 25  
<212> DNA  
<213> Human papillomavirus

<220>  
<221> misc\_feature  
<223> r is a or g; w is t or a; k is t or g; i is inosine; y is c or t;  
n is a, t, g, or c; d is a, t, or g

<220>  
<221> misc\_feature  
<222> (6)..(6)  
<223> n is a, c, g, or t

<400> 1  
cargcnaaaw wwktdaarga ytgtg 25

<210> 2  
<211> 25  
<212> DNA  
<213> Human papillomavirus

<220>  
<221> misc\_feature  
<223> r is a or g; k is t or g; n is a, t, g, or c

<220>  
<221> misc\_feature  
<222> (6)..(6)  
<223> n is a, c, g, or t

<400> 2  
cargcnaaat atktraaaga ttgtg 25

<210> 3  
<211> 25  
<212> DNA  
<213> Human papillomavirus

<220>  
<221> misc\_feature  
<223> r is a or g; w is t or a

<400> 3  
cargcaaaat atgtwaagga ttgtg 25

<210> 4  
<211> 25  
<212> DNA  
<213> Human papillomavirus

<220>  
<221> misc\_feature  
<223> r is a or g; w is t or a

<400> 4  
cargcwaaaa ttgtaaarga ttgtg 25

<210> 5  
<211> 25  
<212> DNA  
<213> Human papillomavirus

<400> 5  
caagcaaaaa tagtaaarga ctgtg 25

<210> 6  
<211> 25  
<212> DNA  
<213> Human papillomavirus

<400> 6  
cargcaaaat atgtaaaaga ctgtg 25

<210> 7  
<211> 23  
<212> DNA  
<213> Human papillomavirus

<400> 7

<210> 8  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 8  
aagctttcta ggaggtacag ttattagtca

30

<210> 9  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 9  
ataaaacata ggggttctaa aatagaaggc

30

<210> 10  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 10  
actaaagttg acagtgttagg taactggaag

30

<210> 11  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 11  
ttaaacaatg gattaagtat aggggtacta

30

<210> 12  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 12  
aaaagatgtc tattaaacaa tggattaagt

30

<210> 13  
<211> 29  
<212> DNA  
<213> Human papillomavirus

<400> 13  
gggtactaaa gttgacagtg taggttaact

29

<210> 14  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 14  
gggaacagtt attagttatg ttaattcctg 30

<210> 15  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 15  
aattgtatacg ccattgttagg gccacctgac 30

<210> 16  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 16  
gggccacctg acactggaa gtcgtgctt 30

<210> 17  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 17  
gggccacctg acactggaa gtcgtgctt 30

<210> 18  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 18  
tgatggaggt gattggaagc aaattgttat 30

<210> 19  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 19  
tgaaaattctt gcaagggtct gtaatatgtt 30

<210> 20  
<211> 30  
<212> DNA

<213> Human papillomavirus

<400> 20  
atggagggtga ttggaagcaa attgttatgt 30

<210> 21  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 21  
gaccaatagt gcaattcctg cgataccaaac 30

<210> 22  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 22  
caaacattat aggcgagccc aaaaaacgaca 30

<210> 23  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 23  
tcctgcgata ccaacaaata gagttataa 30

<210> 24  
<211> 28  
<212> DNA  
<213> Human papillomavirus

<400> 24  
ctgcgataacc aacaaataga gtttataa 28

<210> 25  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 25  
agaaaacgatc tatgtgtatg tcacaatggc 30

<210> 26  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 26

agaagagggc gggtcgtgga aggaaattgc 30

<210> 27  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 27  
ggcggtcggt ggaaggaaat tgccaaattt 30

<210> 28  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 28  
gcacagaaac gatctatgtg tatgtcacaa 30

<210> 29  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 29  
gttagatgtga caaagtttgt gacgaaggtg 30

<210> 30  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 30  
tgagccttat tagttttta caaggatgt 30

<210> 31  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 31  
caaagtttgt gacgaaggtg actggaggga 30

<210> 32  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 32  
acagttttta aaagggtgtg ttatatcatg 30

<210> 33  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 33  
gggtgtgtta tatcatgtgt aaattctaaa 30

<210> 34  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 34  
aaagggtgtg ttatcatg tgtaaattct 30

<210> 35  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 35  
attacacata gatgtgattt aatagatgat 30

<210> 36  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 36  
ttaatgcag ttatgcag gtgtggttat 30

<210> 37  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 37  
tgatttaata gatgtggag gaaactggaa 30

<210> 38  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 38  
tgcaagggtgtg gttatccat 30

<210> 39  
<211> 30  
<212> DNA

<213> Human papillomavirus  
<400> 39  
ttaatagatg atggagaaaa ctggaaacat

30

<210> 40  
<211> 28  
<212> DNA  
<213> Human papillomavirus  
<400> 40  
agggtggacga tgacggtgac tggaggga

28

<210> 41  
<211> 30  
<212> DNA  
<213> Human papillomavirus  
<400> 41  
gcatttctta caaggagcta ttatatccta

30

<210> 42  
<211> 30  
<212> DNA  
<213> Human papillomavirus  
<400> 42  
aaggcaaatg tccatgtctc aatggataaa

30

<210> 43  
<211> 30  
<212> DNA  
<213> Human papillomavirus  
<400> 43  
tgtaaacatt acaagcgagc acaaaaaagg

30

<210> 44  
<211> 30  
<212> DNA  
<213> Human papillomavirus  
<400> 44  
agccttatgc atttttaca gggcacagtt

30

<210> 45  
<211> 30  
<212> DNA  
<213> Human papillomavirus  
<400> 45

tatttcata	gtaaaactcca	ccagccactt	30
<210>	46		
<211>	30		
<212>	DNA		
<213>	Human papillomavirus		
<400>	46		
aatttaggtg	tagtaaatgt	gatgaaggcg	30
<210>	47		
<211>	27		
<212>	DNA		
<213>	Human papillomavirus		
<400>	47		
gaagtgtgat	gaaggcgact	ggaaacc	27
<210>	48		
<211>	30		
<212>	DNA		
<213>	Human papillomavirus		
<400>	48		
gaatgagcct	gatgcacttt	atgcaaggta	30
<210>	49		
<211>	30		
<212>	DNA		
<213>	Human papillomavirus		
<400>	49		
cctgatgcac	tttatgcaag	gtacaataat	30
<210>	50		
<211>	30		
<212>	DNA		
<213>	Human papillomavirus		
<400>	50		
tccatgtgca	aacactatag	gttagcagaa	30
<210>	51		
<211>	30		
<212>	DNA		
<213>	Human papillomavirus		
<400>	51		
acaaatgaga	cgtatgtcta	tgggtgcata	30

<210> 52  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 52  
gacgtatgtc tatgggtgca tggataaaac 30

<210> 53  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 53  
cagtaaattt gaagacacag gaaattggaa 30

<210> 54  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 54  
ggcactgtaa ttagttatgt aaactccagc 30

<210> 55  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 55  
atatgaaaca gtggataaaa tttaggagca 30

<210> 56  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 56  
acgccaaatg aatatgtctc aatggattaa 30

<210> 57  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 57  
cgccaaatga atatgtctca atggattaaa 30

<210> 58  
<211> 30  
<212> DNA

<213> Human papillomavirus

<400> 58  
ttaagggca ctaaaggaat ttcttaaagg 30

<210> 59  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 59  
ggtgcaataa tatcatttgt aaattcaaac 30

<210> 60  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 60  
ggcactaaag gaatttctta aaggaacacc 30

<210> 61  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 61  
agggcactaa aggaatttct taaaggaaca 30

<210> 62  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 62  
cattatctat gtcaaggctgg ataaggtata 30

<210> 63  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 63  
gcacaaaagaa aatcattatac tatgtcagcc 30

<210> 64  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 64

aaatcattat ctatgtcagc ctggataagg	30
<210> 65	
<211> 30	
<212> DNA	
<213> Human papillomavirus	
<400> 65	
aaacatatga atattggaca atggatacag	30
<210> 66	
<211> 30	
<212> DNA	
<213> Human papillomavirus	
<400> 66	
gaaagaaaaac atatgaatat tggacaatgg	30
<210> 67	
<211> 30	
<212> DNA	
<213> Human papillomavirus	
<400> 67	
ttaatttaggt tcttaagtgg atgtgtata	30
<210> 68	
<211> 30	
<212> DNA	
<213> Human papillomavirus	
<400> 68	
taaagcatgt atgttagcaag gtggatgatg	30
<210> 69	
<211> 30	
<212> DNA	
<213> Human papillomavirus	
<400> 69	
gatgaatatg aaacaatgga taaagcatgt	30
<210> 70	
<211> 30	
<212> DNA	
<213> Human papillomavirus	
<400> 70	
aagcatgtat gtagcaaggt ggatgatgg	30

<210> 71  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 71  
gttatttatg gtcctccaaa cacgggtaaa 30

<210> 72  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 72  
aaacaatgga taaagcatgt atgttagcaag 30

<210> 73  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 73  
ttagtttattt atggtcctcc aaacacgggt 30

<210> 74  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 74  
ttagctttttt aggaggtgt a gtgctatcat 30

<210> 75  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 75  
tttgtgattta gtagaggagg aaggtgagtg 30

<210> 76  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 76  
cgtttgtgatt tagtagagga ggaagggtgag 30

<210> 77  
<211> 30  
<212> DNA

<213> Human papillomavirus

<400> 77  
catcggtgtg atttagtaga ggaggaagg 30

<210> 78  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 78  
gggcacaaca gcaacaaatg aatatgtgcc 30

<210> 79  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 79  
cacaacagca acaaatgaat atgtgccagt 30

<210> 80  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 80  
ctgtttggta ctttgtggac cgccaaatac 30

<210> 81  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 81  
tttcaagggt ctgtcatttc atttgtaat 30

<210> 82  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 82  
acatttttta aaaggatgca ttatttcata 30

<210> 83  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 83

cgtggtatga caatggaca atggatacaa 30

<210> 84  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 84  
gagcagaaaa gcgtggtatg acaatggac 30

<210> 85  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 85  
aggatgcatt atttcatatg taaattccaa 30

<210> 86  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 86  
aaagcgtggc atgacaatgg gacaatggat 30

<210> 87  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 87  
agcctgctac atttttaca aggaactgta 30

<210> 88  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 88  
gattacacat agaggccgca aggtggcaga 30

<210> 89  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 89  
attacacata gaggccgcaa ggtggcagac 30

<210> 90  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 90  
agtggattac acatagaggc cgcaagggtgg 30

<210> 91  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 91  
acagtggatt acacatagag gccgcaagggt 30

<210> 92  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 92  
gtaccattta ttagtgcct taaattgttt 30

<210> 93  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 93  
ttacggacca agcgacacag ggaagtcgct 30

<210> 94  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 94  
tacggaccaa gcgacacagg gaagtcgcta 30

<210> 95  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 95  
gagccttata aatttttcc aagggtcagt 30

<210> 96  
<211> 30  
<212> DNA

<213> Human papillomavirus

<400> 96  
ccttataaaat ttttccaag ggtcagtcat 30

<210> 97  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 97  
attacaaaag ggcacagcaa cagcaaatga 30

<210> 98  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 98  
atggaggaga ctggagaaca atagtaaagc 30

<210> 99  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 99  
aagttgtatg gtaatatgcg gaccaccaaa 30

<210> 100  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 100  
caaggatgtg taatatcata tggtaaacgccc 30

<210> 101  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 101  
aggagactgg agaacaatag taaagctatt 30

<210> 102  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 102

gttgtatggt aatatgcgga ccaccaaaca 30

<210> 103  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 103  
aacgacaaat gtcaatgccg caatggatta 30

<210> 104  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 104  
cgggcacaaa aacgacaaat gtcaatgccg 30

<210> 105  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 105  
tcaatgccgc aatggattaa atttagatgc 30

<210> 106  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 106  
atggcgcaat ggattaggtt tagatgtgat 30

<210> 107  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 107  
aaatgactat ggcgcaatgg attaggttt 30

<210> 108  
<211> 30  
<212> DNA  
<213> Human papillomavirus

<400> 108  
attaggttta gatgtgataa atgtgacgat 30

<210> 109  
<211> 30  
<212> DNA  
<213> Human